

NAT'L INST. OF STAND & TECH R.I.C.



A11104 788561

DEPARTMENT OF COMMERCE AND LABOR

---

BULLETIN

OF THE

BUREAU OF STANDARDS

---

VOLUME 4

1907-8













DEPARTMENT OF COMMERCE AND LABOR

---

BULLETIN

OF THE

BUREAU OF STANDARDS

S. W. STRATTON, DIRECTOR

---

VOLUME 4

(Nos. 1, 2, 3, 4)

1907-8



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1908





## INDEX TO VOLUME 4.

---

### A.

- Apparatus for determination of the form of a wave of magnetic flux, *M. G. Lloyd and J. V. S. Fisher*, 467.
- Atomic weight of chlorine, The, *W. A. Noyes and H. C. P. Weber*, 345.
- Atomic weight of hydrogen, The, *W. A. Noyes*, 179.

### B.

- Babcock, H. D., E. B. Rosa* and, The variation of resistances with atmospheric humidity, 121.
- Bates, Frederick*, A quartz compensating polariscope with adjustable sensibility, 461.
- Best method of demagnetizing iron in magnetic testing, On the, *C. W. Burrows*, 205.
- Brooks, H. B.*, A deflection potentiometer for voltmeter testing, 275.
- Burrows, C. W.*, On the best method of demagnetizing iron in magnetic testing, 205.

### C.

- Cady, F. E., E. P. Hyde* and, A comparative study of plain and frosted lamps, 91.
- Capillary electrometer, Note on the use of, *Morton G. Lloyd*, 525.
- Cell, standard, The electrode equilibrium of the, *F. A. Wolff and C. E. Waters*, 81.
- Cells, standard, *Clark and Weston, F. A. Wolff and C. E. Waters*, 1.
- Chlorine, The atomic weight of, *W. A. Noyes and H. C. P. Weber*, 345.
- Chloroplatinic acid, The preparation of, by electrolysis of platinum black, *H. C. P. Weber*, 365.

- Circles, On the self-inductance of, *Edward B. Rosa and Louis Cohen*, 149.
- Clark and Weston* standard cells, *F. A. Wolff and C. E. Waters*, 1.
- Climate, Effect of, on resistances, 135.
- Coblentz, W. W.*, Instruments and methods used in radiometry, 391.
- Coblentz, W. W.*, Selective radiation from the Nernst glower, 533.
- Cohen, Louis, Edward B. Rosa* and, On the self-inductance of circles, 149.
- Cohen, Louis*, The influence of frequency on the resistance and inductance of solenoidal coils, 161.
- Cohen, Louis*, The self-inductance of a solenoid of any number of layers, 383.
- Coil, The self-inductance of a, of any length and any number of layers of wire, *Edward B. Rosa*, 369.
- Comparative study of plain and frosted lamps, A, *E. P. Hyde and F. E. Cady*, 91.
- Conductors, linear, The self and mutual inductance of, *Edward B. Rosa*, 301.

### D.

- Deflection potentiometer for voltmeter testing, A, *H. B. Brooks*, 275.
- Demagnetizing iron in magnetic testing, On the best method of, *C. W. Burrows*, 205.

### E.

- Effect of wave form upon the iron losses in transformers, *Morton G. Lloyd*, 477.
- Electrode equilibrium of the standard cell, The, *F. A. Wolff and C. E. Waters*, 81.

Electrolysis of platinum black, The preparation of chloroplatinic acid by, *H. C. P. Weber*, 365.

Electrometer, capillary, Note on the use of, with alternating voltages, *Morton G. Lloyd*, 525.

### F.

*Fisher, J. V. S., M. G. Lloyd* and, Apparatus for determination of the form of a wave of magnetic flux, 467.

Form of wave of magnetic flux, Apparatus for determination of a, *M. G. Lloyd* and *J. V. S. Fisher*, 467.

Frequency, The influence of, on the resistance and inductance of solenoidal coils, *Louis Cohen*, 161.

Function of a periodic variable given by the steady reading of an instrument; with a note on the use of the capillary electrometer with alternating voltages, *Morton G. Lloyd*, 525.

### G.

Glass volumetric apparatus, The testing of, *N. S. Osborne* and *B. H. Veazey*, 553.

### H.

Helium gas, electrically conducting, The luminous properties of, *P. G. Nutting*, 511.

Humidity, atmospheric, The variation of resistances with, *E. B. Rosa* and *H. D. Babcock*, 121.

*Hyde, E. P.*, and *F. E. Cady*, A comparative study of plain and frosted lamps, 91.

Hydrogen, The atomic weight of, *W. A. Noyes*, 179.

### I.

Inductance of solenoidal coils, The influence of frequency on the resistance and, *Louis Cohen*, 161.

Inductance, self and mutual, of linear conductors, *Edward B. Rosa*, 301.

Influence of frequency on the resistance and inductance of solenoidal coils, The, *Louis Cohen*, 161.

Instruments and methods used in radiometry, *W. W. Coblentz*, 391.

Iron losses in transformers, Effect of wave form upon the, *Morton G. Lloyd*, 477.

Iron, On the best method of demagnetizing, in magnetic testing, *C. W. Burrows*, 205.

### L.

Lamps, plain and frosted, A comparative study of, *E. P. Hyde* and *F. E. Cady*, 91.

*Lloyd, M. G.* and *J. V. S. Fisher*, Apparatus for determination of the form of a wave of magnetic flux, 467.

*Lloyd, Morton G.*, Effect of wave form upon the iron losses in transformers, 477.

*Lloyd, Morton G.*, Function of a periodic variable given by the steady reading of an instrument; with a note on the use of the capillary electrometer with alternating voltages, 525.

Luminous properties of electrically conducting helium gas, The, *P. G. Nutting*, 511.

### M.

Magnetic flux, Apparatus for determination of the form of wave of, *M. G. Lloyd* and *J. V. S. Fisher*, 467.

Magnetic testing, On the best method of demagnetizing iron in, *C. W. Burrows*, 205.

### N.

Nernst glower, Selective radiation from the, *W. W. Coblentz*, 533.

*Noyes, W. A.*, and *H. C. P. Weber*, The atomic weight of chlorine, 345.

Noyes, W. A., The atomic weight of hydrogen, 179.

Nutting, P. G., The luminous properties of electrically conducting helium gas, 511.

## O.

Osborne, N. S., and B. H. Veazey, The testing of glass volumetric apparatus, 553.

## P.

Periodic variable, Function of  $a$ , given by the steady reading of an instrument; with a note on the use of the capillary electrometer with alternating voltages, M. G. Lloyd, 525.

Platinum black, The preparation of chloroplatinic acid by the electrolysis of, H. C. P. Weber, 365.

Polariscope, A quartz compensating, with adjustable sensibility, Frederick Bates, 461.

Potentiometer, deflection, for voltmeter testing, H. B. Brooks, 275.

Preparation of chloroplatinic acid by electrolysis of platinum black, H. C. P. Weber, 365.

## Q.

Quartz compensating polariscope with adjustable sensibility, A, Frederick Bates, 461.

## R.

Radiation, selective, from the Nernst glower, W. W. Coblentz, 533.

Radiometry, Instruments and methods used in, W. W. Coblentz, 391.

Resistance and inductance of solenoidal coils, The influence of frequency on the, Louis Cohen, 161.

Resistances, The variation of, with atmospheric humidity, E. B. Rosa and H. D. Babcock, 121.

Rosa, Edward B., The self-inductance of a coil of any length and any number of layers of wire, 369.

Rosa, Edward B., The self and mutual inductance of linear conductors, 301.

Rosa, Edward B., On the self-inductance of a toroidal coil of rectangular section, 141.

Rosa, Edward B., and Louis Cohen, On the self-inductance of circles, 149.

Rosa, E. B., and H. D. Babcock, The variation of resistances with atmospheric humidity, 121.

## S.

Selective radiation from the Nernst glower, W. W. Coblentz, 533.

Self-inductance of a coil of any length and any number of layers of wire, Edward B. Rosa, 369.

Self-inductance of a solenoid of any number of layers, Louis Cohen, 383.

Self and mutual inductance of linear conductors, Edward B. Rosa, 301.

Self-inductance of circles, On the, Edward B. Rosa and Louis Cohen, 149.

Self-inductance of a toroidal coil of rectangular section, Edward B. Rosa, 141.

Solenoid, The self-inductance of  $a$ , of any number of layers, Louis Cohen, 383.

Solenoidal coils, The influence of frequency on the resistance and inductance of, Louis Cohen, 161.

Spherical reduction factors in photometry, 105.

Standard cell, The electrode equilibrium of the, F. A. Wolff and C. E. Waters, 81.

Standard cells, Clark and Weston, F. A. Wolff and C. E. Waters, 1.

## T.

Testing of glass volumetric apparatus, The, N. S. Osborne and B. H. Veazey, 553.

Toroidal coil, On the self-inductance of  $a$ , of rectangular section, Edward B. Rosa, 141.

Transformers, Effect of wave form upon the iron losses in, Morton G. Lloyd, 477.

## V.

Variation of resistances with atmospheric humidity, *E. B. Rosa* and *H. D. Babcock*, 121.

*Veazey*, *B. H.*, *N. S. Osborne* and, The testing of glass volumetric apparatus, 553.

Voltmeter testing, A deflection potentiometer for, *H. B. Brooks*, 275.

Volumetric apparatus, glass, The testing of, *N. S. Osborne* and *B. H. Veazey*, 553.

## W.

Wave form, Effect of, upon the iron losses in transformers, *Morton G. Lloyd*, 477.

*Waters*, *C. E.*, *F. A. Wolff* and, Clark and Weston standard cells, 1.

*Waters*, *C. E.*, *F. A. Wolff* and, The electrode equilibrium of the standard cell, 81.

*Weber*, *H. C. P.*, *W. A. Noyes* and, The atomic weight of chlorine, 345.

*Weber*, *H. C. P.*, The preparation of chloroplatinic acid by electrolysis of platinum black, 365.

Weston, Clark and, standard cells, *F. A. Wolff* and *C. E. Waters*, 1.

*Wolff*, *F. A.*, and *C. E. Waters*, The electrode equilibrium of the standard cell, 81.

*Wolff*, *F. A.*, and *C. E. Waters*, Clark and Weston standard cells, 1.

## O















